6th Grade
Main Rangefinder 2

It is important that you explain and show how you solved the problems on this assessment. If you use a calculator, show how you set up the math.

❶ Mrs. Smith's class of 24 students has earned a pizza party. They have $75.00 to spend on pizza and pop.

One topping pizza = $7.50 Six pack pop = $1.25

a. If each pizza has eight slices, and each student wants 3 slices, how many pi[illegible]? *Show or explain how you found your answer.*

They would need 24 pizzas.

8 × 3 = 24

Limited understanding of situations

b. If each student wants one can of pop, how many six packs of pop will they need? *Show or explain how you found your answer.*

They would need 4 packs of pop.

24 ÷ 6 = 4

4 × 6 = 24

c. The class decides to buy enough for 3 slices of pizza and one can of pop for each student. What will be the total cost for the pizza party and how much change will Mrs. Smith's class receive from the $75.00? *Show or explain how you found your answer.*

Mrs. Smith would recieve $25.20 as change.

$75.00 − 49.80 = $25.20 Change

Pizza $45.00 + Pop 4.80 = $49.80

Pizza's: $7.50 × 24 = $180.00 + $15.00 = $195.00

Six Pack Pop: $1.25 × 4 = $4.80

d. If there is 1/8 of one pizza left and 5/8 of another pizza left at the end of the p[illegible] one whole pizza would be remaining? *Show or explain how you found your a[illegible]*

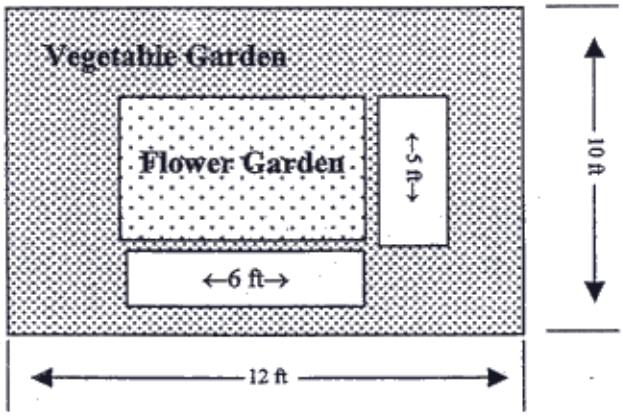
There is 6/8 of a whole pizza remaining.

1/8 + 5/8 = 6/8

Frequent computational or surface errors

Read problems 2, 3, 4 and 5 on the next few pages. Select three problems to answer. Answer ALL of the parts of the three problems you select to answer. Cross out the one problem that you do not choose to answer.

❷ Lynn is going to put a flower garden in the middle of a vegetable garden.



Area = length x width

a. What is the perimeter of the vegetable garden? *Show or explain how you found your answer.*

The perimeter of the vegetable garden is 44 feet.

10 ft
10 ft
12 ft
+12 ft
44 ft

b. What is the perimeter of the flower garden? *Show or explain how you found you*

The garden is 22 feet in length.

5 ft
5 ft
6 ft
+6 ft
22 ft

Limited process development

c. How much **total** fencing will Lynn need to buy to fence around each of the gardens? *Show or explain how you found your* answer.

Lynn will need 22 feet of fence.

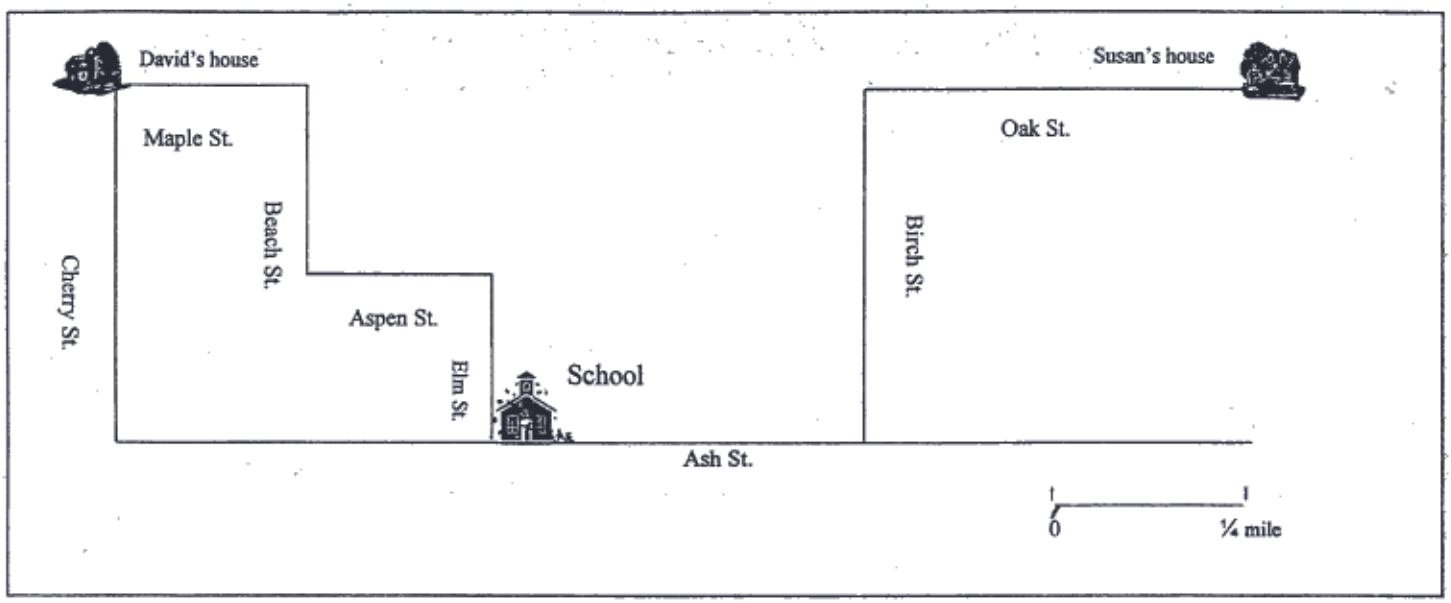
5 ft
5 ft
6 ft
+6 ft
22 ft

d. What is the area of the flower garden and what fraction of the total garden area is this? *Show or explain how you found your answer.*

The fraction is 22 feet.

44 ft
-22 ft
22 ft

❸ The following is a map of David's and Susan's neighborhood. Use the given scale to answer the questions.



a. Would it [illegible] David to walk to school using the Cherry Street route or the Maple Street route? *[illegible] how you found your answer.*

Limited structure

Point >< = at the smallest #.

(7)

Maple St. 5 ¼ miles Cherry St. 10 ¼ miles

Maple Street would be the shortest of the two streets to walk to school.

b. About how far do David and Susan each have to walk to school? Who has the shortest walk to school? *Show or explain how you found your answer.*

Susan has to walk the shortest distance.

David 5 1/4 miles

Susan 4 1/4 miles David

Limited communication skills

c. Susan walks ¼ mile in five minutes. School starts at 8:20 AM. What time does she need to leave her house to make it to school on time? *Show or explain how you found your answer.*

Susan should start walking at 8:00 AM.

4
×5
20

8:20 AM
−20
8:00 Am

Demonstrates basic use of thinking skills

❹ Jan's math test scores are 93, 95, 76, 88 and 93.

a. What is her average (mean) score? *Show or explain how you found your answer.*

Her average is 350.

b. Using Jan's five test scores, find her median score. *Show or explain how you found your answer.*

Her median is 87.

c. What is the mode of her scores? *Show or explain how you found your answer.*

76 is her Mode.

Find the SMALLEST Number,
(76) 88, 93, 93

d. Jan really wants a mean score of 90. What is the lowest score she can earn on the next test so that she has a mean score of 90? *Show or explain how you found your answer.*

❺ The first three figures of a pattern are:

a. Complete the table showing the number of triangles, and the number of sticks required to form them.

Number of Triangles	Number of Sticks
1	3
2	5
3	7

Limited structure

b. ...any sticks would be required to make 6 triangles? *Show or explain how you found your ...er.*

13 sticks are needed

c. How many sticks would be needed to make 25 triangles? *Show or explain how you found your*

Limited use of problem-solving strategies

46 sticks would be needed.

d. Write the rule that explains the relationship between the number of triangles and the number of sticks needed. When there is one triangle there are always three lines, but each thime you add a triangle there a always two more,

Demonstrates basic use of thinking skills